WHAT IS CLAIMED IS:

1. A method of reducing the incidence of post-operative adhesion formation in any animal that is susceptible to unwanted adhesion formation following surgery, comprising the step of topically applying as an adhesion preventative an effective amount of a carboxyl-containing polysaccharide or a pharmacologically acceptable salt thereof which has been ionically crosslinked with a polyvalent cation to a site of surgical trauma.

2. The method of claim 1 wherein the adhesion preventative is derived from a carboxyl-containing polysaccharide selected from the group consisting of carboxymethyl cellulose, hyaluronic acid, or an alkali and alkaline earth metal salt thereof.

3. The method of claim 2 wherein the adhesion preventative is derived from hyaluronic acid.

4. The method of claim 2 wherein the adhesion preventative is derived from sodium hyaluronate.

5. The method of claim 4 wherein the sodium hyaluronate is ionically crosslinked with a polyvalent cation selected from the group consisting of iron, aluminum, and chromium provided in an amount sufficient to crosslink in the range of from about 60 to about 100 percent of the carboxyl groups of the sodium hyaluronate.

6. The method of claim 5 wherein the sodium hyaluronate is ionically crosslinked with iron.

7. The method of claim 1 wherein the adhesion preventative is applied directly to the site of surgical trauma in one application by injection through a syringe.

~~8~~ 12. The method of claim ~~7~~ 11 wherein the adhesion preventative is applied during surgery or at the conclusion of surgery prior to closing.

~~9~~ 7. The method of claim 2 wherein the adhesion preventative is administered in combination with another adhesion preventative aid.

~~10~~ 8. The method of claim ~~9~~ 7 wherein the adhesion prevention aid is a non-steroidal anti-inflammatory drug.

~~11~~ 9. The method of claim ~~10~~ 8 wherein the non-steroidal anti-inflammatory drug is tolmetin.

~~12~~ 10. The method of claim 2 wherein the adhesion preventative is administered in combination with an agent selected from the group consisting of an antibiotic and a growth factor.

13. The method of claim 1 wherein the adhesion preventative is made from a carboxyl-containing polysaccharide selected from the group consisting of carboxymethyl cellulose, carboxymethyl chitin, carboxymethyl ~~chitosan~~ chitosan, carboxymethyl starch, alginic acid, pectin, carboxymethyl dextran, heparin, heparin sulfate, chondroitin sulfate, hyaluronic acid and pharmaceutically acceptable salts thereof.

14. The method of claim 1 wherein the adhesion preventative is made from a carboxyl-containing

polysaccharide selected from the group consisting of carboxymethyl cellulose, carboxymethyl starch, alginic acid, pectin, carboxymethyl dextran, heparin, heparin sulfate, chondroitin sulfate, hyaluronic acid and pharmaceutically acceptable salts thereof.

13 15. The method of claim 1 wherein the adhesion preventative is made from hyaluronic acid crosslinked with a trivalent cation selected from the group consisting of iron , aluminum and chromium.

16. The method of claim 15 wherein the hyaluronic acid carboxyl group have been ionically crosslinked in the range of from about 60 to 100 percent by the trivalent cations.

Sub C4

17. The method of claim 16 wherein the viscosity of the adhesion preventative is in the range of from about 2,500 cps to about 250,000 cps.

18. An adhesion preventative comprising a sterile non-inflammatory hyaluronic acid fraction having a weight average molecular weight of in the range of from about 550,000 to about 8,000,000 having carboxyl acid groups which are ionically crosslinked by at least one trivalent cation selected from the group consisting of iron, aluminum and chromium wherein in the range of from about 60 to about 100 percent of the carboxyl acid group have been ionically crosslinked by said trivalent cations and the adhesion preventative has a viscosity of at least 2,500 cps.

cancel B37